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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,560	03/30/2001	Helmut Bechtel	PHD 99,103	1464

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

DONG, DALEI

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,560

Applicant(s)

BECHTEL ET AL.

Examiner

Dalei Dong

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/806,560.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,100,633 to Okumura.

Regarding to claims 1-3, Okumura discloses in Figure 1, “a surface discharge AC type plasma display panel (PDP) according to the present invention. As shown in the drawing, the PDP comprises a front substrate 1 (*a transparent front plate*) and a rear substrate 2 (*a carrier plate*). Ribs 3 (*rib structure which divides the space between the carrier plate and the front plate into plasma cell*) arranged in parallel to form stripes are formed on the rear substrate 2 in a manner to define stripe-like discharge cells. Also,

stripe-like address electrodes 4 (*one or more electrode arrays on the carrier plate*) are formed between adjacent ribs 3 such that each discharge cell formed between adjacent ribs 3 is provided with the address electrode 4. Further, phosphor layers 5 are formed which cover the surfaces of the rear substrate 2, address electrodes 4 and ribs 3. The phosphor layer 5 (*phosphor layer*) contains a red-emitting phosphor, a green-emitting phosphor or a blue-emitting phosphor. On the other hand, formed on the front substrate 6 are stripe-like transparent electrodes 6 (*one or more electrode arrays on the transparent front plate*) extending in a direction perpendicular to the address electrodes 4 and bus electrodes 7 overlapping with the transparent electrodes 7 to lower the resistance of the transparent electrodes 7. The surface of the front substrate 1 is covered with a transparent dielectric layer 8 and a protective layer 9. The protective layer 9 consisting of, for example, MgO serves to improve the discharge characteristics. The front substrate 1 of the particular construction is disposed on the rear substrate 2 of the construction described above, followed by sealing the junction between the front and rear substrates. Further, a mixed gas (*mixture of gases*) such as He--Xe or Ne--Xe is sealed as a discharge gas in the discharge cells formed between the rear substrate 2 and the front substrate 1" (column 3, lines 33-60).

Okumura also discloses "In order to permit the light emitted from the phosphor to be transmitted efficiently to the outside, it is effective to dispose a reflective layer of a visible light between the phosphor layer and the rear substrate and between the phosphor layer and the rib. For increasing the reflection of the emitted light, it is desirable to form a visible light reflective layer over substantially the entire region between the phosphor

layer and each of the other members of the PDP including the rear substrate, the address electrode and the rib. The materials effectively reflecting the visible light, which can be used in the present invention, include, for example, particles of MgO , $\text{MgF}_{2.2}$, $\alpha\text{-Al}_{2.2}\text{O}_{3.3}$, $\text{MgAl}_{2.2}\text{O}_{4.4}$, $3\text{Al}_{2.2}\text{O}_{3.3}5\text{SiO}_{2.2}$ and $2\text{MgO}2\text{Al}_{2.2}\text{O}_{3.3}5\text{SiO}_{2.2}$. Particularly, MgO particles can be used as the materials effectively reflecting the visible light. It is desirable for these materials to have an average particle size of 10 to 200 nm (*the powder having an average grain diameter of greater than 100nm and less than 1000 nm*). The particles having an average particle size falling within the range noted above permit effectively scattering the visible light. Also, these materials are satisfactory in the electron emitting characteristics, compared with $\text{TiO}_{2.2}$ used for forming a known white reflective layer. It follows that the materials used for forming the visible light reflective layer are also effective for facilitating the discharge. The visible light reflective layer should desirably have a thickness of 0.1 to 5 μm , preferably 0.1 to 1 μm (*reflection layer has a layer thickness less than 1 μm*). Where the thickness is less than 0.1 μm , the effect of reflecting the visible light cannot be obtained. Where the thickness exceeds 5 μm , however, the discharge space is diminished, leading to a low brightness" (column 5, lines 27-59).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,100,633 to Okumura.

Regarding to claim 4, Okumura discloses the claimed invention except for the reflection layer is comprised of multilayer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have manufacture the reflection layer utilizing multilayer, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Response to Arguments

5. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art are cited to further show the state of the art of composition of a plasma display device.

U.S. Patent No. 5,541,479 to Nagakubo.

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U.S. Patent No. 6,140,767 to Sreeram.

U.S. Patent No. 6,162,750 to Miwa.

U.S. Patent No. 6,321,569 to Sreeram.

U.S. Patent No. 6,329,751 to Yoo.

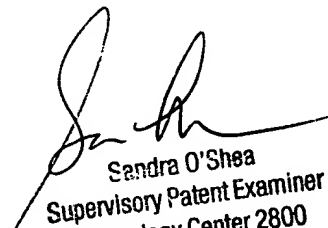
U.S. Patent No. 6,559,598 to Justel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (703)308-2870. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703)305-4939. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

D.D.
August 29, 2003



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800